UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,653	02/19/2004	Susumu Kinoshita	064731.0385	5498

5073 7590 07/19/2007

BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

EXAMINER	
KIM, DAVID S	

ART UNIT	PAPER NUMBER
2613	

NOTIFICATION DATE	DELIVERY MODE
07/19/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mike.furr@bakerbotts.com
ptomail1@bakerbotts.com

Office Action Summary	Application No.	Applicant(s)	
	10/782,653	KINOSHITA ET AL.	
	Examiner	Art Unit	
	David S. Kim	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-16,19-23,26,29,31-35,38 and 40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-16,19-23,26,29,31-35,38 and 40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Applicant's response to the claim objections in the previous Office Action (sent on 12 February 2007) is noted and appreciated. Applicant responded by amending and canceling various claims. Applicant's response overcomes the previous objections, which are presently withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 1, 4-7, 11-16, and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuyama et al. (WO 02/103939 A1, hereinafter "Katsuyama", references to the English version of U.S. Patent Application Publication No. US 2004/0247318 A1) in view of Finan et al. (U.S. Patent No. 6,718,139 B1, hereinafter "Finan") and Vaughan (U.S. Patent Application Publication No. 2003/0192040 A1).

Regarding claim 1, Katsuyama discloses:

An optical network, comprising:

an optical ring (ring in Fig. 1);

a plurality of local nodes (NODEs in Fig. 1) coupled to the optical ring;

each local node of the plurality of local nodes configured to receive traffic at an assigned wavelength, disparate from wavelengths assigned to other local nodes (e.g., paragraph [0031]); and

a data center node (CONTROLLER in Fig. 1) coupled to the optical ring and operable to receive traffic from the plurality of local nodes, sort at least some of the traffic by destination (e.g. steps S105-S110 in Fig. 4), and transmit the traffic to a corresponding destination node at the assigned wavelength for that node (e.g., steps S111-S112).

Katsuyama does not expressly disclose:

the data center node being operable to ***provide a centralized storage of data for the local nodes***,

to receive traffic from the plurality of local nodes ***including requests for data***,

to retrieve the requested data from the centralized storage associated with the data center node,

to sort ***the requested data*** by destination, and

to transmit ***the requested data*** as traffic to a corresponding destination ***local*** node at the assigned wavelength for that ***local*** node.

Regarding "a centralized storage of data for the local nodes", such storage is known throughout the field of communication networks. Finan shows an example of such storage (Fig. 1, disk farm 118) in an optical network environment. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement "a centralized storage of data for the local nodes". One of ordinary skill in the art would have been motivated to do this since centralized storage usually provides some advantages and relieves individual distributed systems from managing extraneous information (Vaughan, paragraph [0005]). Also, placement of the centralized storage in the data center node is an obvious variation. That is, the centralized storage has to be located at some location on the network. Placing it in any suitable node, including the data center node, is an obvious variation.

Regarding "requests for data" and "to retrieve requested data from the centralized storage", such management of data requests is the common way that one accesses data from a storage location. That is, one asks for the stored data from the location of the stored data. Then, the stored data is accordingly retrieved.

Regarding "to sort the requested data by destination" and "to transmit the requested data as traffic to a corresponding destination local node at the assigned wavelength for that local node", notice that Katsuyama already performs these limitations (e.g., steps S105-S112 in Fig. 4) for data transfer (paragraph [0063]). Accordingly, one would reasonably expect treatment of the "requested data" in a similar, if not same, fashion.

Regarding claim 4, Katsuyama in view of Finan and Vaughan discloses:

The optical network of claim 1, wherein the plurality of local nodes are further operable to pass through traffic at wavelengths disparate from assigned wavelengths without optical-to-electrical conversion ("pass-through" in paragraph [0035]).

Regarding claim 5, Katsuyama in view of Finan and Vaughan discloses:

The optical network of claim 1, wherein the data center node comprises a switch (electric switch 18 in Fig. 3) operable to selectively pass the traffic to a transmitter (any E/O converter 14) transmitting at the assigned wavelength.

Regarding claim 6, Katsuyama in view of Finan and Vaughan discloses:

The optical network of claim 1, wherein the data center node comprises a services module (e.g., Finan, link multiplexer 106 in node 104-3 in Fig. 1) operable to process a request for data and provide the requested data.

Regarding claim 7, Katsuyama in view of Finan and Vaughan does not expressly disclose:

The optical network of claim 6, wherein the requested data comprises audiovisual content (but implied by the "digital TV" in paragraph [0033]).

Regarding claim 11, Katsuyama in view of Finan and Vaughan discloses:

A data center node, comprising:

a plurality of receivers (O/E converters 13 in Fig. 3) operable to receive traffic from a plurality of nodes including requests for data (see the treatment of "requests for data" in the treatment of claim 1 above);

a data center (components 17-18) operable to:

provide a centralized storage of data for the plurality of nodes (Finan, Fig. 1, disk farm 118);

retrieve requested data from the centralized storage (see the treatment of "retrieve requested data" in the treatment of claim 1 above);

sort the requested data by destination node (e.g., Katsuyama, steps S105-S110 in Fig. 4);

selectively pass the requested data to a transmitter associated with the destination node (e.g., Katsuyama, steps S111-S112); and

a plurality of transmitters (E/O converters 14) operable to transmit the requested data (see the treatment of "transmit the requested data" in the treatment of claim 1 above) at a wavelength assigned to the destination node.

Regarding claim 12, Katsuyama in view of Finan and Vaughan discloses:

The data center node of claim 11, wherein the data center comprises a switch (electric switch 18) operable to selectively pass the traffic to a transmitter transmitting at the assigned wavelength.

Regarding claim 13, Katsuyama in view of Finan and Vaughan discloses:

The data center node of claim 11, wherein the data center comprises a services module (e.g., Finan, link multiplexer 106 in node 104-3 in Fig. 1) operable to process a request for data and provide the requested data.

Regarding claim 14, Katsuyama in view of Finan and Vaughan does not expressly disclose:

The data center node of claim 13, wherein the requested data comprises audiovisual content (but implied by the "digital TV" in paragraph [0033]).

Regarding claim 15, Katsuyama in view of Finan and Vaughan discloses:

A method of transmitting traffic in an optical network, comprising:

receiving traffic from a plurality of local nodes at a data center node coupled to an optical ring (CONTROLLER 5 in Fig. 1), the traffic including requests for data (see the treatment of "requests for data" in the treatment of claim 1 above);

retrieving the requested data (see the treatment of "retrieve requested data" in the treatment of claim 1 above) from a centralized storage associated with the data center node (Finan, Fig. 1, disk farm 118);

sorting the requested data (see the treatment of "sort the requested data" in the treatment of claim 1 above) by destination node (e.g., steps S105-S110 in Fig. 4);

transmitting the requested data (see the treatment of "transmit the requested data" in the treatment of claim 1 above) as traffic at a wavelength assigned to the destination local node (e.g., step S109); and

receiving traffic at the destination local node at the assigned wavelength (e.g., step S112) and passing through traffic not at the assigned wavelength (e.g., "pass-through" in paragraph [0035]).

Regarding claim 16, Katsuyama in view of Finan and Vaughan discloses:

The method of claim 15, wherein the assigned wavelength is disparate from wavelengths assigned to other local nodes (paragraph [0031]).

Regarding claim 23, Katsuyama in view of Finan and Vaughan discloses:

A system for transmitting traffic in an optical network, comprising:

means for receiving traffic from a plurality of local nodes at a data center node coupled to an optical ring (O/E converters 13 in Fig. 3), the traffic including requests for data (see the treatment of "requests for data" in the treatment of claim 1 above);

means for retrieving the requested data (see the treatment of "retrieve requested data" in the treatment of claim 1 above) from a centralized storage associated with the data center node (Finan, Fig. 1, disk farm 118);

means for sorting the requested data (see the treatment of "sort the requested data" in the treatment of claim 1 above) by destination local node (e.g., steps S105-S110 in Fig. 4);

means for transmitting the requested data (see the treatment of "transmit the requested data" in the treatment of claim 1 above) as traffic at a wavelength assigned to the destination local node (e.g., step S109); and

means for receiving traffic at the destination local node at the assigned wavelength (e.g. step S112) and passing through traffic not at the assigned wavelength (e.g., "pass-through" in paragraph [0035]).

5. **Claims 3 and 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuyama in view of Finan and Vaughan, as applied to the claims above, further in view of Elrefaie ("Multiwavelength survivable ring network architectures").

Regarding claim 3, Katsuyama in view of Finan and Vaughan does not expressly disclose:

The optical network of claim 1, wherein the optical ring comprises bi-directional pathways.

However, such rings are extremely common in the art, as exemplified by the ring with bi-directional pathways in Elrefaie (Fig. 6). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to include such bi-directional pathways in the network of Katsuyama. One of ordinary skill in the art would have been motivated to do this to provide the common feature of fault protection for higher network survivability (Elrefaie, p. 1245, col. 1, last paragraph).

Regarding claim 19, Katsuyama in view of Finan, Vaughan, and Elrefaie discloses:

The method of claim 15, further comprising:

transmitting traffic in a first direction in the optical ring; and

transmitting traffic in a second direction in the optical ring (Elrefaie, the two directions in Fig. 6).

Regarding claim 20, Katsuyama in view of Finan, Vaughan, and Elrefaie discloses:

The method of claim 15, further comprising selectively positioning a set of switches in each local node to provide protection switching in response to a fault occurring in the optical rings (Elrefaie, Fig. 5).

6. **Claims 8-10, 21-22, and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuyama in view of Finan and Vaughan, as applied to the claims above, further in view of Ramaswami et al. ("*Optical Networks: A Practical Perspective, 2nd ed.*", hereinafter "Ramaswami").

Regarding claim 8, Katsuyama in view of Finan and Vaughan does not expressly disclose:

The optical network of claim 1, wherein at least one of the plurality of nodes is a hub node operable to selectively pass and terminate individual traffic streams.

However, hub nodes are well known in the art, as shown by Ramaswami (Figs. 10.11-10.12). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to arrange a node in the network of Katsuyama as a hub node, such as one of the plurality of nodes. One of ordinary skill in the art would have been motivated to do this since a single ring is often only part of an overall network, and hub nodes often provide the interconnections between multiple rings that are needed to provide the communication channels between nodes of different rings (Ramaswami, p. 555, last paragraph).

Regarding claim 9, Katsuyama in view of Finan, Vaughan, and Ramaswami does not expressly disclose:

The optical network of claim 8, wherein the hub node is a first hub node and is coupled to a second hub node associated with a second optical ring.

However, such multiple hub nodes are well known in the art, as shown by Ramaswami (Figs. 10.11-10.12). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to include such a second hub node associated with a second optical ring in the network of Katsuyama. One of ordinary skill in the art would have been motivated to do this since a single ring is often only part of an overall network, and hub nodes often provide the interconnections between multiple rings that are needed to provide the communication channels between nodes of different rings (Ramaswami, p. 555, last paragraph).

Regarding claim 10, Katsuyama in view of Finan, Vaughan, and Ramaswami discloses:

The optical network of claim 9, wherein the destination node is located on the second optical ring (Ramaswami, Figs. 10.11-10.12).

Regarding claim 21, Katsuyama in view of Finan, Vaughan, and Ramaswami discloses:

The method of claim 15, further comprising dropping traffic to a second optical ring (Ramaswami, Figs. 10.11-10.12, "drop" on p. 556, last paragraph).

Regarding claim 22, Katsuyama in view of Finan, Vaughan, and Ramaswami discloses:

The method of claim 21, wherein the destination node is located on the second optical ring (Ramaswami, Figs. 10.11-10.12).

Regarding claim 26, Katsuyama in view of Finan, Vaughan, and Ramaswami discloses:

The system of claim 23, wherein the optical ring comprises a first and a second optical ring Ramaswami, two rings in Figs. 10.11-10-12), further comprising means for selectively switching traffic from one ring to the other ring (Ramaswami, hub nodes in Figs. 10.11-10.12).

7. **Claims 29, 31, 35, and 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuyama in view of Finan and Vaughan, as applied to the claims above, further in view of Mukai et al. ("A networkwide backup system with inter-memory autonomic copy mechanism", hereinafter "Mukai").

Regarding claim 29, Katsuyama in view of Finan and Vaughan discloses:

An optical network, comprising:

an optical ring (ring in Fig. 1);

a plurality of local nodes coupled to the optical ring (NODEs in Fig. 1);

each local node of the plurality of local nodes configured to receive traffic at an assigned wavelength, disparate from wavelengths assigned to other local nodes (e.g., paragraph [0031]);

a primary data center node (CONTROLLER in Fig. 1) coupled to the optical ring and operable to provide a centralized storage of data for the local nodes (Finan, Fig. 1, disk farm 118), receive traffic from the plurality of local nodes including requests for data (see the treatment of "requests for data" in the treatment of claim 1 above) and data to be stored at the data center node (data storage conventionally includes data to be stored from user locations), retrieve the requested data from the centralized storage associated with the primary data center node (see the treatment of "retrieve requested data" in the treatment of claim 1 above), store data from at least some of the traffic (data storage conventionally includes data to be stored from user locations), sort the requested data (see the treatment of "sort the requested data" in the treatment of claim 1 above) by destination (e.g. steps S105-S110 in Fig. 4), transmit the requested data (see the treatment of "transmit the requested data" in the treatment of claim 1 above) as traffic to a corresponding destination local node at the assigned wavelength for that node (e.g., steps S111-S112).

Katsuyama in view of Finan and Vaughan does not expressly disclose:

said primary data center node operable to ***transmit a copy of the stored data to a back-up data center node***; and

the back-up data center node operable to receive and ***store the copy*** of the stored data transmitted by the primary data center node ***in response to a back-up event***, receive traffic from the plurality of local nodes including requests for the stored data, retrieve the requested data, sort the requested data by destination, and transmit the requested data as traffic to a corresponding destination node at the assigned wavelength for that node.

However, the limitations of ***transmitting a copy of stored data to a back-up data center node*** and the back-up data center node ***storing the copy of the stored data in response to a back-up event*** are known in the art, as shown by Mukai (p. 89, col. 1, 1st paragraph; p. 91, memory update in section 3.2). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to include these limitations in the network of Katsuyama. One of ordinary skill in the art would have been motivated to do this to improve reliability of the system (Mukai, p. 89-90, Introduction).

Moreover, as the back-up data center node would perform similar functions as the primary data center node, it would be obvious for the back-up data center node to be operable to similarly perform the primary data center node functions of receiving traffic from the plurality of local nodes including requests for the stored data, retrieving the requested data, sorting the requested data by destination, and transmitting the requested data as traffic to a corresponding destination node at the assigned wavelength for that node.

Regarding claim 31, Katsuyama in view of Finan, Vaughan, and Mukai discloses:

The network of claim 30, wherein the plurality of nodes are further operable to pass through traffic at wavelengths disparate from assigned wavelengths without optical-to-electrical conversion (Katsuyama, e.g., "pass-through" in paragraph [0035]).

Regarding claim 35, claim 35 is a method claim that corresponds largely to the network claim 29. Therefore, the recited means in network claim 29 read on the corresponding steps in method claim

35. Claim 35 also includes limitations absent from claim 29. Katsuyama in view of Finan, Vaughan, and Mukai does not expressly disclose these limitations:

transmitting the copy of the stored data at a ***wavelength assigned to a back-up data center node.***

However, notice that these limitations correspond to the communication steps that CONTROLLER 5 implements to communicate with the NODEs in Fig. 1 of Katsuyama (Katsuyama, e.g., paragraph [0035]). As the back-data center node would constitute another NODE to which CONTROLLER 5 would communicate, one could obviously do so by the known communication steps of Katsuyama.

Regarding claim 38, Katsuyama in view of Finan, Vaughan, and Mukai discloses:

The method of claim 35, wherein the wavelength assigned to the back-up data center node is disparate from wavelengths assigned to other nodes (Katsuyama, e.g., paragraph [0031]).

8. **Claims 32-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuyama in view of Finan, Vaughan, and Mukai, as applied to the claims above, and further in view of Ramaswami.

Regarding claim 32, Katsuyama in view of Finan, Vaughan, and Mukai does not disclose:

The network of claim 31, wherein at least one of the plurality of local nodes is a hub node operable to selectively pass and terminate individual traffic streams.

However, hub nodes are well known in the art, as shown by Ramaswami (Figs. 10.11-10.12). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to arrange a node in the network of Katsuyama as a hub node, such as one of the plurality of nodes. One of ordinary skill in the art would have been motivated to do this since a single ring is often only part of an overall network, and hub nodes often provide the interconnections between multiple rings that are needed to provide the communication channels between nodes of different rings (Ramaswami, p. 555, last paragraph).

Regarding claim 33, Katsuyama in view of Finan, Vaughan, Mukai, and Ramaswami does not expressly disclose:

The optical network of claim 32, wherein the hub node is a first hub node and is coupled to a second hub node associated with a second optical ring.

However, such multiple hub nodes are well known in the art, as shown by Ramaswami (Figs. 10.11-10.12). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to include such a second hub node associated with a second optical ring in the network of Katsuyama. One of ordinary skill in the art would have been motivated to do this since a single ring is often only part of an overall network, and hub nodes often provide the interconnections between multiple rings that are needed to provide the communication channels between nodes of different rings (Ramaswami, p. 555, last paragraph).

Regarding claim 34, Katsuyama in view of Finan, Vaughan, Mukai, and Ramaswami does not expressly disclose:

The network of claim 33, wherein the back-up data center node is located on the second ring.

However, locating the back-up data center node at any suitable remote location (Mukai, p. 90, "remote backup" in col. 1, 2nd full paragraph), including on the second ring, is an obvious variation.

9. **Claim 40** is rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuyama in view of Finan, Vaughan, and Mukai as applied to the claims above, and further in view of Elrefaie.

Regarding claim 40, Katsuyama in view of Finan, Vaughan, and Mukai does not expressly disclose:

The method of claim 35, further comprising selectively positioning a set of switches in all nodes to provide protection switching in response to a fault occurring in the optical ring.

However, such switches are extremely common in the art, as exemplified by the switches in Elrefaie (Fig. 5). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to include such switches in the network of Katsuyama. One of ordinary skill in the art would have been motivated to do this to provide the common feature of fault protection for higher network survivability (Elrefaie, p. 1245, col. 1, last paragraph).

Response to Arguments

10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments are based on the limitations newly introduced by Applicant's most recent amendment (filed on 11 May 2007). The standing rejections address these limitations in view of the newly discovered teachings of Finan and Vaughan. Accordingly, Applicant's arguments are moot.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Abatiell et al. (CA 2304289 A1) is cited to show centralized storage of data for a plurality of nodes (e.g., central storage site D in Fig. 5).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Kim whose telephone number is 571-272-3033. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth N. Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DSK

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER